



Future Programming Skill Trends

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OUTLINE



- Executive Summary
- Introduction
- Methodology
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 - Dashboard
- Discussion
 - Findings & Implications
- Conclusion
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EXECUTIVE SUMMARY



- Collecting demand of jobs open from various technology and locations
- Analyzing the data and identify insights and trends
 - The top programming languages
 - The top databases skills
 - The popular IDEs
- Bringing the information together with dashboard showing current skills, future trend skills, and Demographics

INTRODUCTION



- To keep pace of changing technology programing is the significant to expertise in IT solutions and consultants.
- The focus problems is
 - What are the programing/database skills in the present?
 - What are the programing/database skills in the future?

METHODOLOGY



- Data Collection (sources)
 - Stack overflow developer 2019 survey
 - GitHub job postings
 - Programming languages annual salary
- Data Collection (methods)
 - Scraping internet websites
 - Accessing APIs to collect data
 - Exploring Data
- Data Wrangling
 - Finding Missing Values
 - Determine Missing Values
 - Finding Duplicates
 - Removing Duplicates
- Data Source : Job posting, Training portals and Surveys
- `"https://cf-courses-data.s3.us.cloud-objectstorage.appdomain.cloud/IBM-DA0321ENSkillsNetwork/LargeData/m2_survey_data.csv"`

RESULTS

- Programming Language Trends

- Insights
- Findings & Implications

- Database Trends

- Insights
- Findings & Implications

- Dashboards

- Current Technology Usage
- Future Technology Trends
- Demographics

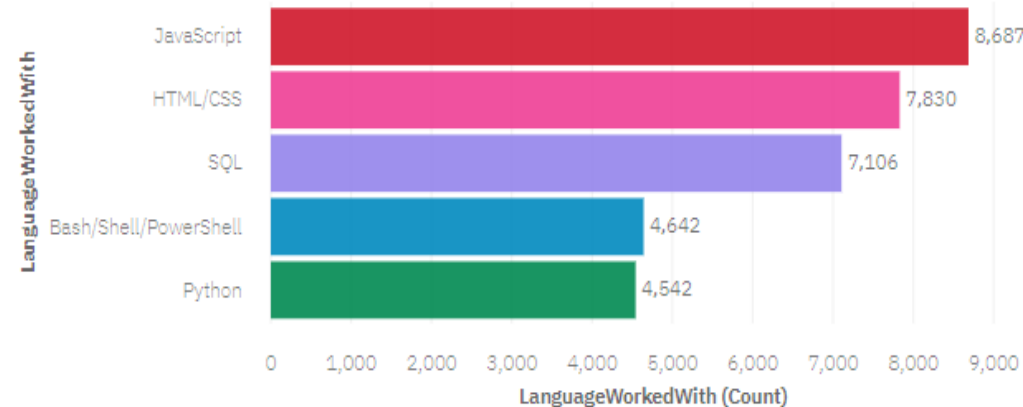
PROGRAMMING LANGUAGE TRENDS

Current Year

Top 5 Language Worked with

LanguageWorkedWith

● Bash/Shell/PowerShell ● HTML/CSS ● JavaScript ● Python ● SQL

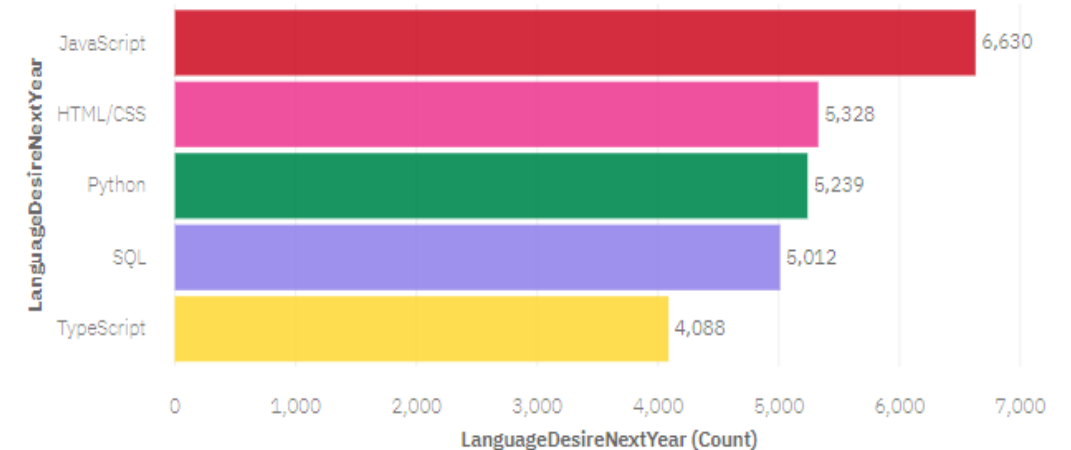


Next Year

Top 5 Language Desire next year

LanguageDesireNextYear

● HTML/CSS ● JavaScript ● Python ● SQL ● TypeScript



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most highest number of people working with, followed by HTML/CSS
- The third i.e. SQL is replaced by Python
- TypeScript is expected to be in the 5th place, while the Bash/Shell/PowerShell is out

Implications

- JavaScript and HTML/CSS will be still in the trends
- People are more interested in Python
- SQL will be still preferable

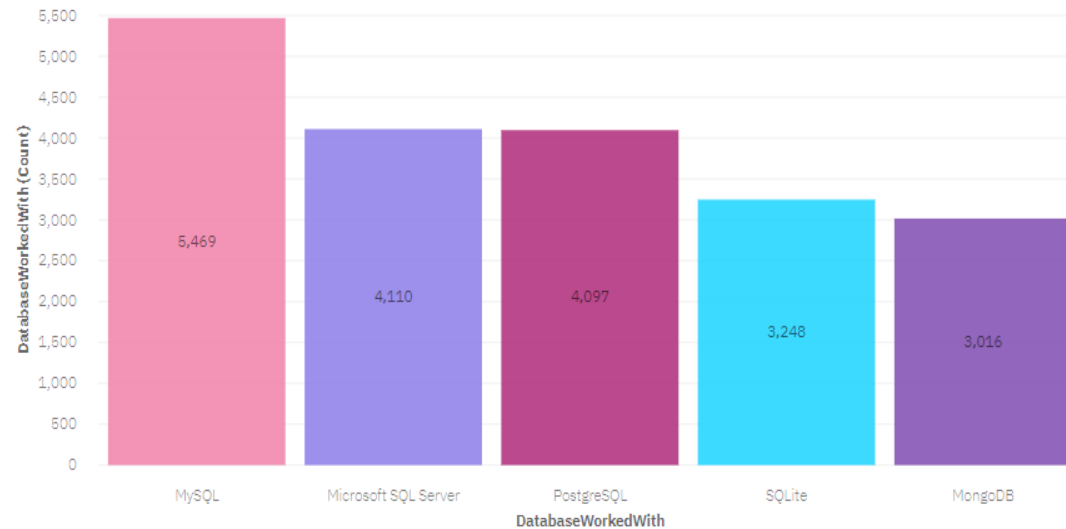
DATABASE TRENDS

Current Year

Top 5 Database Worked With

DatabaseWorkedWith

Microsoft SQL Server MongoDB MySQL PostgreSQL SQLite

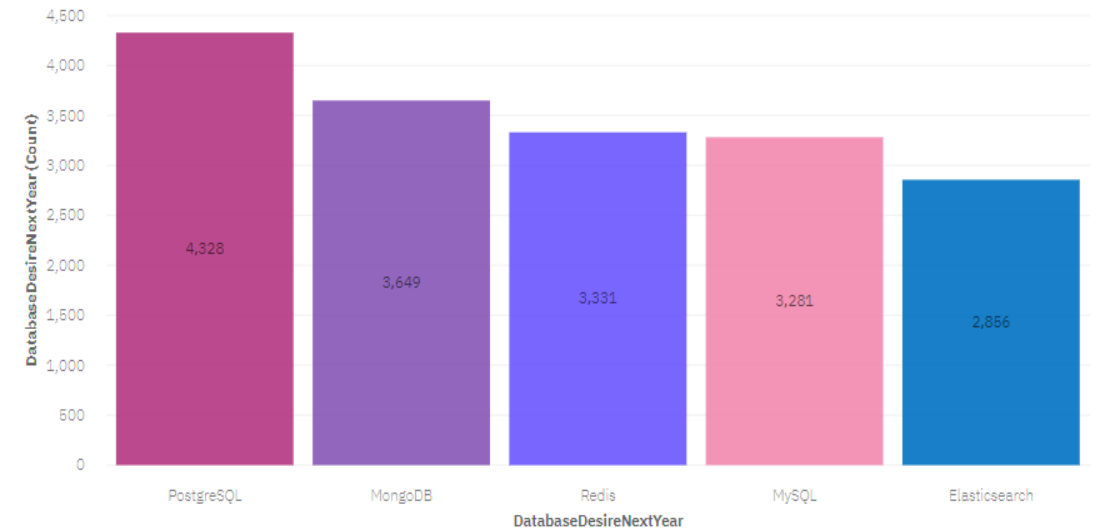


Next Year

Top 5 Database Desire next year

DatabaseDesireNextYear

Elasticsearch MongoDB MySQL PostgreSQL Redis



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- In next year, PostgreSQL is presented to be the 1st place instead MySQL
- MangoDB is changed from 5th to 2 nd place
- Microsoft SQL Server and SQLite is estimated to be replaced by Elasticsearch

Implications

- PostgreSQL will be used most used Database in upcoming years
- MangoDB will be much more popular
- Elasticsearch will be used in the top 5th used databases

DASHBOARD

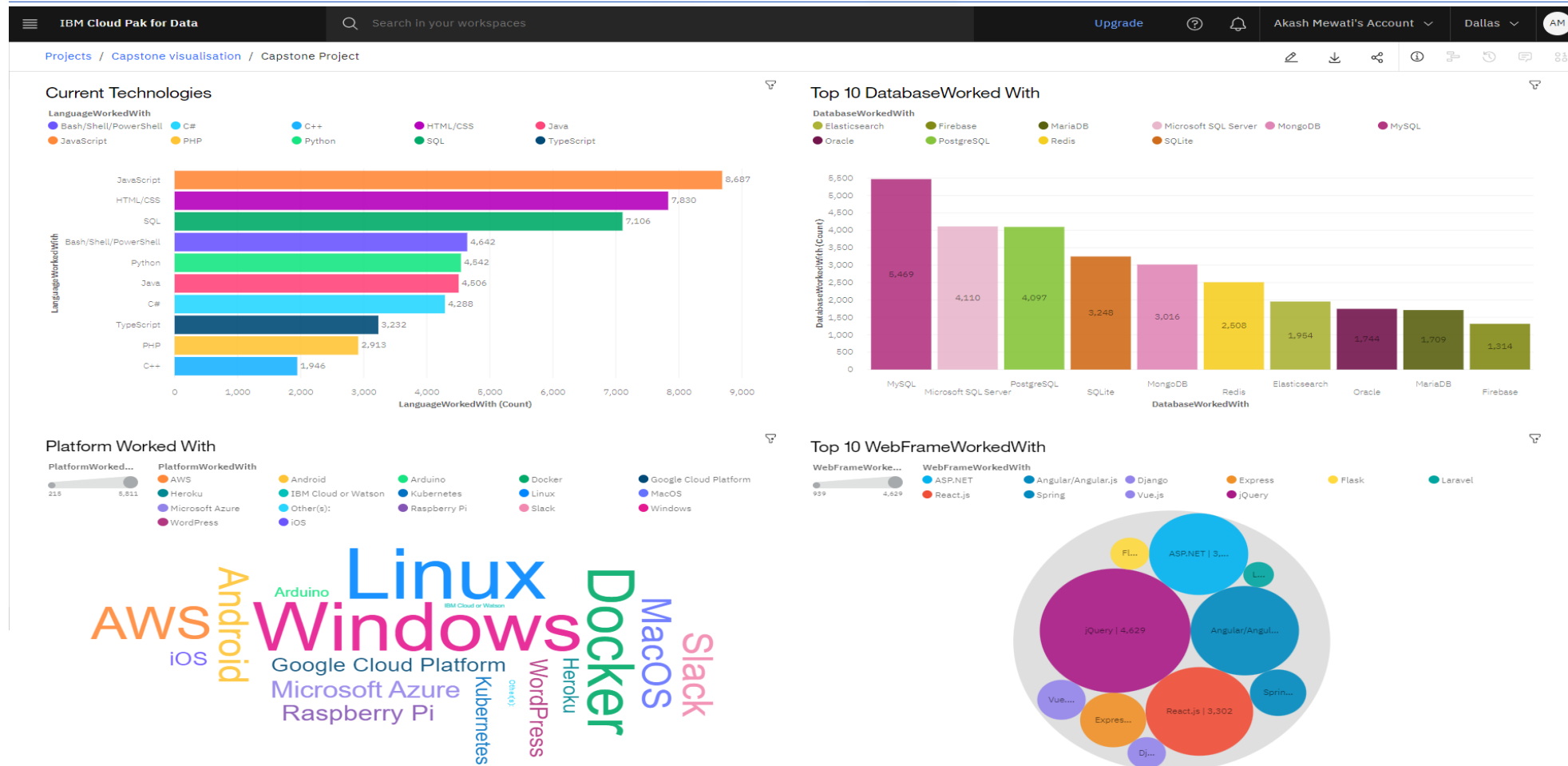


Link for the Cognos Dashboard

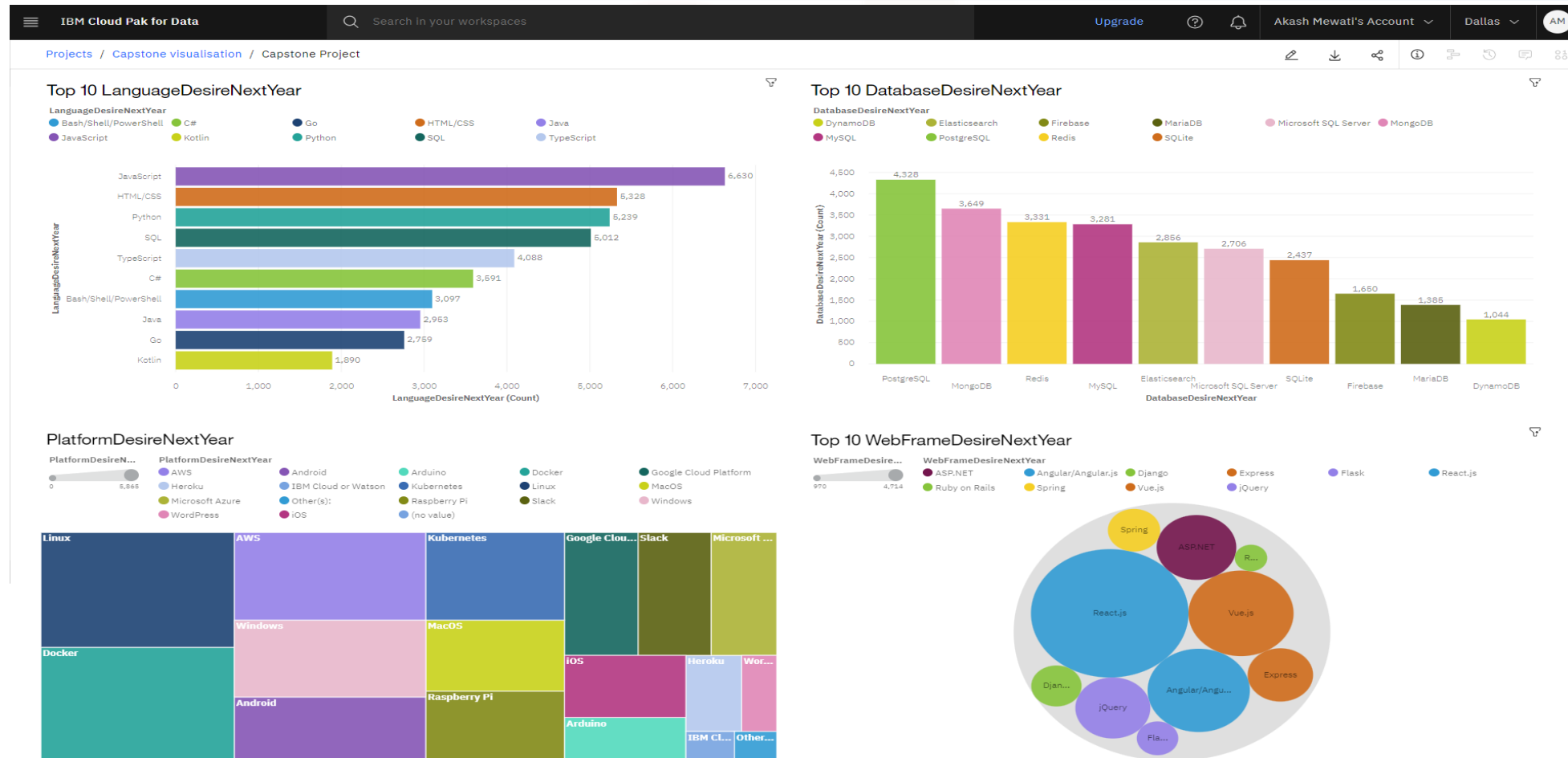


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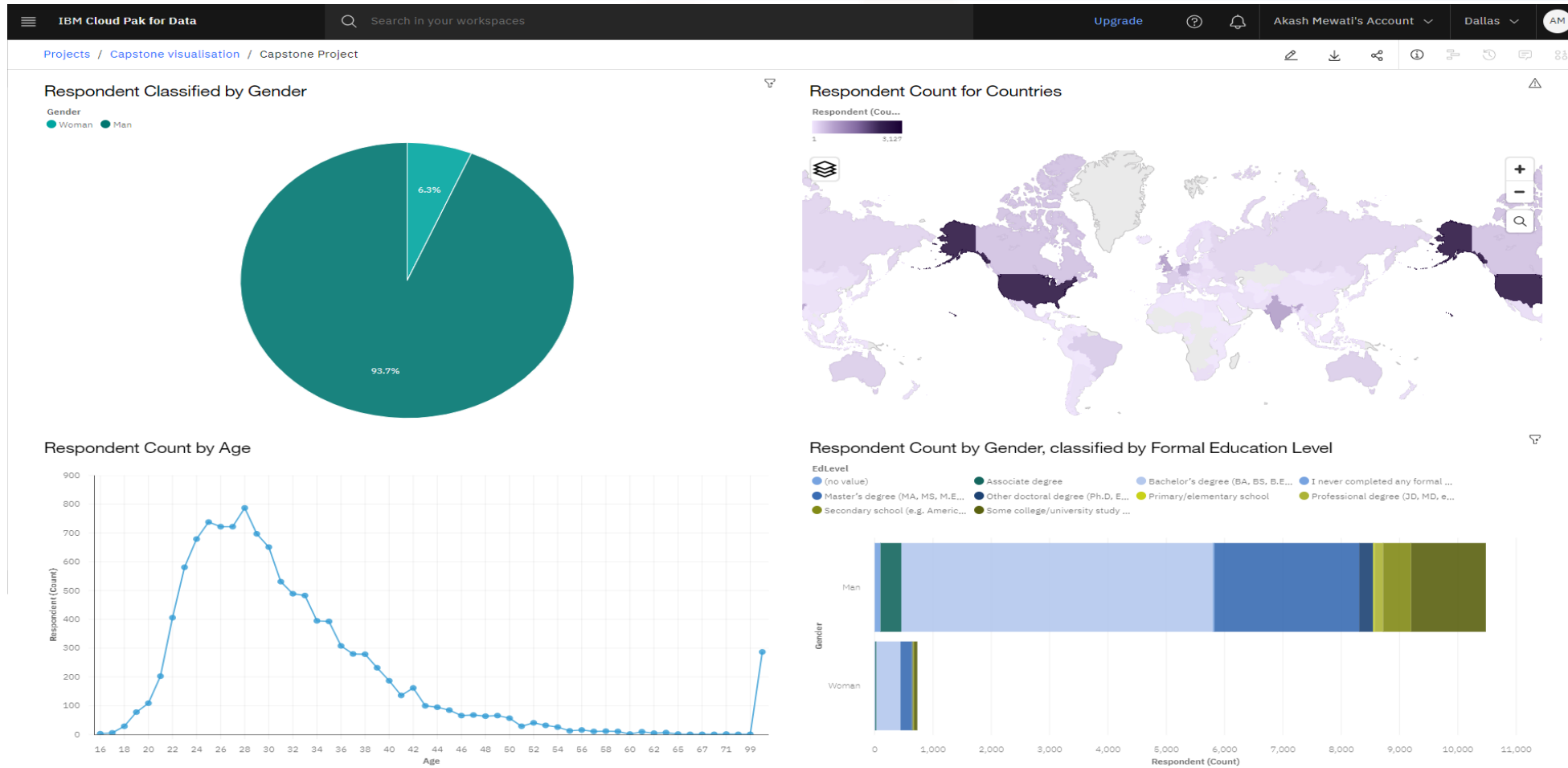
DASHBOARD TAB 1



DASHBOARD TAB 2



DASHBOARD TAB 3



DISCUSSION



- Why the SQL servers are remained the most interest in the future?
- Technology Usage Trend Now and Future
- What is the key value of HTML/CSS to be still required?

OVERALL FINDINGS & IMPLICATIONS

Findings

- By next year, JavaScript and HTML/CSS will be remained in the top 1st and 2nd
- While SQL is going to be surpassed by Python, Bash/Shell/PowerShell are not shown in the next year
- PostgreSQL is presented to be the 1st place instead MySQL, compared with disappearing of Microsoft SQL Server and SQLite
- Platform Linux is the largest proportion, while windows will be replaced by Docker
- React.js is predicted to be the highest preference of Web Frame in the next year instead of jQuery
- By gender, men is shown response more than women which the most number presented in Russia Federation and age around 28 who have Bachelor's degree

Implications

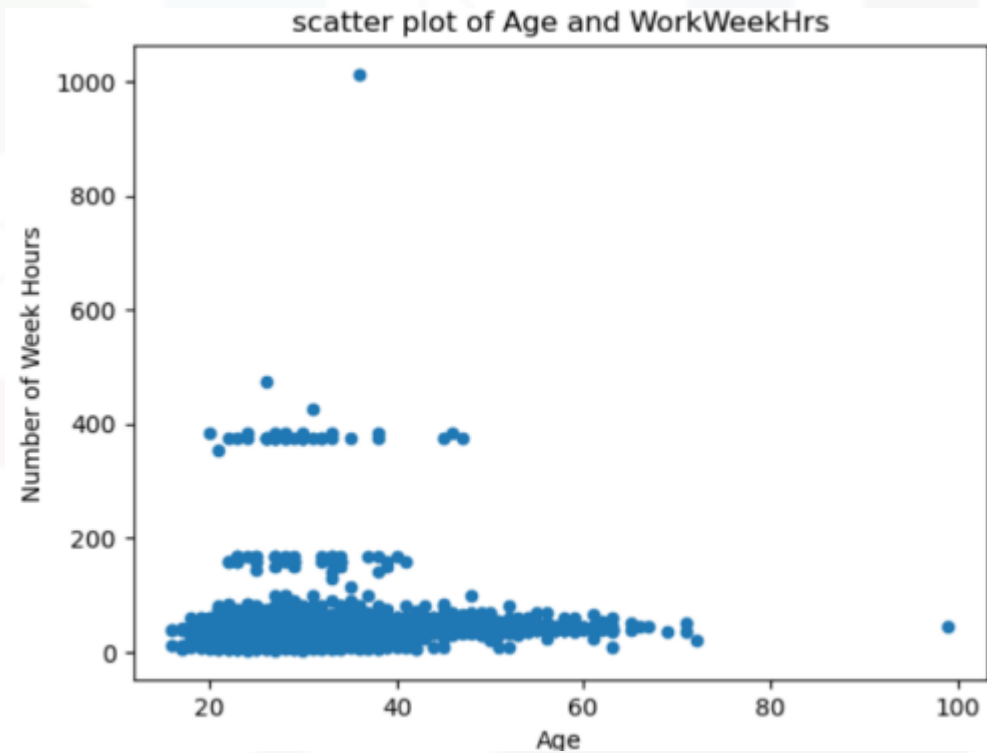
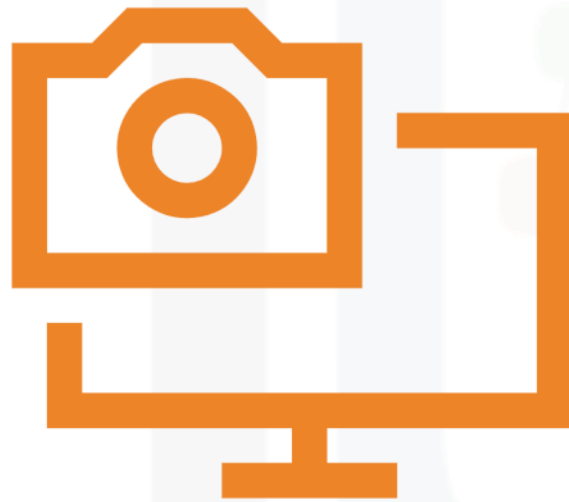
- JavaScript and HTML/CSS will be continue popular
- python is going to be more interested
- SQL servers will be required but the most popular database is expected to be PostgreSQL
- Docker is more preferred as much as Linux
- The demand of jQuery is decreasing
- It is assumed that The large number of young Russian men who have Bachelor's degree tend to response in the analysis

CONCLUSION



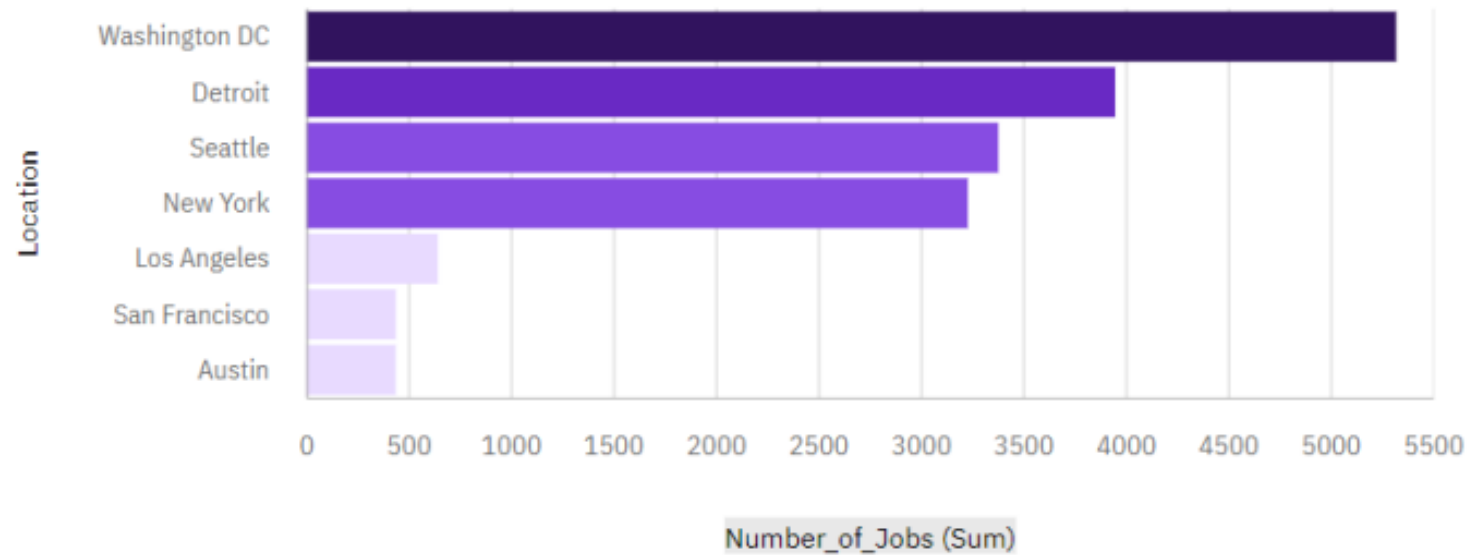
- HTML/CSS is estimated to stay popular the same in the next year
- PostgreSQL will be the most demand of database
- Linux platform is predicted to stay the same at 1st requirement
- The most percentage of Web Frame will be occupied by React.js
- Men are interested in IT skills more than women

APPENDIX



JOB POSTINGS

Number_of_Jobs by Location



POPULAR LANGUAGES

Annual average salary by Language name

